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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/606,885	06/29/2000	Yuji Kuroda	SONY-T0850	7213

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EXAMINER

PSITOS, ARISTOTELIS M

ART UNIT PAPER NUMBER

2653

DATE MAILED: 12/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/606,885

Applicant(s)

KURODA ET AL.

Examiner

Aristotelis M Psitos

Art Unit

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-17,19-32 and 34-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-17,19-32 and 34-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/23/02 & 7/22/02 have been entered.

Drawings

The newly submitted drawings have been approved. Although these new figures have correspondence with the claimed subject matter, the examiner strongly recommends a key associated with these figures for ease of understanding what layer is what. This greatly improves the understanding of the claimed subject matter.

Claim Rejections - 35 USC § 112

Claims 32, and 34-44 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claim 32 fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in Paper No. 15 filed 7/22/02. In that paper, applicant has stated the reflection/reflective layer is present, and this statement indicates that the invention is different from what is defined in the claim(s) because no such reflection layer is found in the claim. Although the independent claim refers back to such in line 7, there is no positive recitation of such a limitation in the remainder of the claim.

In the following rejection, the examiner takes the position that claim 32 does include such a layer.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1, 5-8, 13, 14, 17, 21-24, 29, 30, 32, 36 – 39, and 44 are rejected under 35 U.S.C. 103(a) as being obvious over JP 11-126387 in view of Nonoyama et al/or the acknowledge prior art of figure 3, or alternatively the other way around, e.g. Nonoyama et al/acknowledged prior art in view of JP 11-126387.

The newly amended claims recite the placement of a light reflective layer directly formed on the substrate.

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JP 11-126837 discloses an optical recording medium in which a substrate 12 has formed directly thereon a reflective layer – 131. The recording layer 132 is next formed and finally a further protective layer, 133 is found – see the abstract. Furthermore, also depicted in figures 5, 6 and 9 are additional layers.

Applicants' attention is drawn to figure 1 and its disclosure. The examiner interprets layer 5 as the claimed first protective layer.

With respect to claims 5, 6, 7 & 8, applicants' attention is drawn to col. 5 line 47 to column 6 line 29. The limitations of these claims are interpreted to be present – note the materials recited (claim 8), the heat conductivity (claim 6), and the difference in conductivity between layers 5 and 6 (claim 5). With respect to claim 7, because the limitations of claim 8 – dependent upon 7 are found in the reference, the examiner concludes that the limitation re the quenching coefficient is inherently present.

With respect to claim 13 – the examiner interprets layer 3 as the limitation, and because the material is phase change type, the limitation of claim 14 is also considered met.

With respect to independent claims 17 and 32, applicants' attention is drawn to figure 2 and its disclosure. With respect to the dependent claims (21-24, 29 & 30 and 36- 39 and 44) see the above discussion of claims 5-8, 13 and 14.

✓ The description of the acknowledged prior art of figure 3 referred to in the specification discloses the composition of an optical record in a "near field" recording environment. Identification of this
✓ acknowledged prior art is respectfully requested to complete the search report. ✓

It would have been obvious to modify the base system of the JP document with the above teachings from either Nonoyama et al/the acknowledged prior art to provide for the additional well known first protective layer, motivation is to provide for further protection of the recording layer as taught by these documents.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

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2. Claims 19 – 20 and 34 – 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 1 above, and further in view of Novotny et al/ the acknowledged prior art.

The existence of near field recording systems is considered known and taught by the Novotny et al reference. Although the Nonoyama et al system does not recite such a recording capability, the examiner considers the use of the recording system to be one of choice. Alternatively, using the record medium type of Nonoyama et al with the near field recording system of Novotny et al is also considered a selection of recording media.

It would have been obvious to one of ordinary skill in the art to modify the system of Nonoyama et al with the teaching from Novotny et al, motivation is to save valuable resources by using the near field recording methodology for the recording system of Novotny et al since such is considered a selection of alternative recording systems available to those of ordinary skill in the art for the inherent ability of increasing recording density. Alternative, modifying the Novotny et al system with the particular recording media of Nonoyama et al is considered obvious, a selection of all ready existing record media in this environment.

Alternatively, the acknowledged prior art discloses the near field recording system and as such could be relied upon for such without the further above noted teaching from Novotny et al.

3. Claims 45 – 50, 55 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-126387 considered with Nonoyama et al and all further considered with either the acknowledged prior art or Novotny et al.

Independent claim 45 includes the above record medium structure of claim 1, plus the near field recording ability and the additional limitation with respect to the na.

The JP 11-126387 and Nonoyama et al references are relied upon for the reasons stated in paragraph 1 above.

Novotny et al and or the acknowledged prior art is relied upon for the reasons stated in paragraph 2 above and as disclosed with respect to the disclosed acknowledged prior art.

The overall near field recording ability with the claimed record media is considered obvious for the reasons stated above.

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4. Claims 9, 25, 40 and 51 rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1, 17, 32 and 45 as stated above, and further in view of Yoshinari et al.

The limitation of these claims, plurality of layers for the film is considered to be taught by the Yoshinari et al reference – see figure 3 and its description for instance.

It would have been obvious to one of ordinary skill in the art to modify the system of the prior art as relied upon with respect to the independent claims with the teaching from Yoshinari et al, motivation is to increase the heat dissipation/radiation ability by substituting/ modifying the single layer with a plurality of layers as taught by Yoshinari et al.

5. Claims 10, 26, 41 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1, 17, 32 and 45 as stated above, and further in view of Okubo.

The limitation of these claims, that of the reflective metal layer in the appropriate position is considered known as taught by figure 2 of the Okubo reference.

It would have been obvious to one of ordinary skill in the art to modify the system of the art as relied upon with respect to the independent claims with the teaching from Okubo, motivation is to save valuable resources by using existing media using the appropriate metal reflective layer.

6. Claims 11,12, 27, 28, 42, 43, 53, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1, 17, 32 and 45 as stated above and further in view of Kikuchi et al.

The ability of having antireflection layers for their inherent use in this environment is known as taught by the Kikuchi et al reference.

It would have been obvious to one of ordinary skill in the art to modify the system of the art as relied upon with respect to the independent claims with the teaching from Kikuchi et al, motivation is to save valuable resources by using existing antireflection layer abilities in this environment for their inherent uses.

7. Claims 15, 30 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1, 17 and 45 above, and further in view of either Takeuchi et al or Novotny et al.

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The ability of using mo type of recording abilities as the recording technique is taught by either Takeuchi et al or Novotny et al.

The examiner concludes that selection of one type of recording technique over another is merely a selection between equivalents with no unexpected results seen to occur there from and predicated on routine engineering criteria such as availability, cost, etc.

It would have been obvious to one of ordinary skill in the art to modify the system of the art as relied upon with respect to the independent claims with the teaching from either Takeuchi et al or Novotny et al, motivation is to increase the flexibility of the base system by using alternative equivalent recording capabilities.

8. Claims 16, 31 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1, 17, and 45 above, and further in view of the admitted prior art.

As far as the examiner concludes/interprets from the disclosure, the ability of using a dye as the recording material is merely a selection of equivalent recording layers. No unexpected results are seen to occur from selecting a recording layer using dyes as opposed to phase change type as opposed to mo type.

It would have been obvious to one of ordinary skill in the art to modify the system of the art as relied upon with respect to the independent claims with the teaching from the admitted prior art, motivation is to increase the flexibility of the system by using alternative equivalent recording layers as available.

9. Claim 1, 5 –10, 13 and 14 are rejected under 35 U.S.C. 103(a) as being obvious over JP 11-126378 further considered with Miyamoto et al.

JP 11-126378 is relied upon for the reasons stated in paragraph 1 above.

With respect to Miyamoto et al, applicants' attention is drawn to figure 1, and the associated disclosure with respect to the materials comprising the appropriate layers, especially the protective layers surrounding the recording layer.

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It would have been obvious to modify the base system of JP 11-126387 with the additional protective layers motivation is to provide for the protection of the recording material/layer as taught by the Miyamoto et al reference.

10. Claims 17-26,29, 32-42,44-52,55-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al as applied to claims 1,5-10,13 and 14 above, and further in view of Novotny et al.

The secondary reference to Novotny et al is relied upon for the reasons stated in paragraph 2 above.

It would have been obvious to one of ordinary skill in the art to use secondary teaching with regards to a near field recording system and use the appropriate medium found in the primary references. This is considered a selection of alternative recording systems available to those of ordinary skill in the art for the inherent ability of increasing recording density. That the record of the primary references is used in this recording system is of course self-evident.

The remaining depending claims find clear support/parallel with the above noted depending claims 5-10, 13 and 14 and no further analysis is made thereto.

11. Claims 11,12, 27, 28, 42, 43, 53, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-126378 -Miyamoto et al as applied to claims 1,5-10,13 & 14 as stated above, and further in view of Kikuchi et al.

The secondary reference to Kikuchi et al is relied upon for the reasons stated in paragraph 6 above.

It would be obvious to one of ordinary skill in the art to modify the above base system with the additional teaching from Kikuchi et al motivation is to save valuable resources by using existing antireflection layer abilities in this environment for their inherent uses.

12. Claims 15, 30 & 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-126378-Miyamoto et al as applied to claims 1, 5-10,13 & 14 as stated above, and further in view of either Takeuchi et al or Novotny et al.

Either of the secondary references is relied upon for the reasons stated in paragraph 7 above.

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It would have been obvious to one of ordinary skill in the art to modify the system of the art as relied upon with respect to the independent claims with the teaching from either Takeuchi et al or Novotny et al, motivation is to increase the flexibility of the base system by using alternative equivalent recording capabilities.

13. Claims 16, 31 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-126378- Miyamoto et al as applied to claims 1, 5-10, 13 and 14 as stated above, and further in view of the admitted prior art.

As far as the examiner concludes/interprets from the disclosure, the ability of using a dye as the recording material is merely a selection of equivalent recording layers. No unexpected results are seen to occur from selecting a recording layer using dyes as opposed to phase change type as opposed to mo type.

It would have been obvious to one of ordinary skill in the art to modify the system of the art as relied upon with respect to the independent claims with the teaching from the admitted prior art, motivation is to increase the flexibility of the system by using alternative equivalent recording layers as available.

Conclusion

The examiner has developed a new reference to JP 11-126378 which discloses a reflective layer formed upon a substrate in this environment, which has been relied upon as stated above.

It must also be noted that Okubo, US patent 6203877 at col. 3 lines 30+ also discloses the ability of replacing the normal dielectric layer that is found immediately adjacent the substrate with a metal reflecting layer for the reasons stated therein.


Additionally, Uno et al is cited as illustrative of another optical disc disclosing a thermal diffusion layer(s) in this environment with an thermal coefficient lower than that of the final overcoat layer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8 - 4.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Korzuch can be reached on (703) 308-4825/305-6137. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Aristotelis M Psitos
Primary Examiner
Art Unit 26513

AMP
December 12, 2002